

-2-

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Appl. No. 10/024,814

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (original) An apparatus, comprising:
 - an enclosure having an opening; and
 - a light-emitting device inside the enclosure;
 - wherein the light emitted through the opening is only visible to a speaker when the speaker's mouth is within a sensitivity region of a microphone.
2. (original) The apparatus recited in claim 1, wherein the enclosure has sloped sides.
3. (original) The apparatus recited in claim 1, wherein the walls of the enclosure are coated to absorb light.
4. (original) The apparatus recited in claim 1, wherein the opening is asymmetrical.
5. (original) The apparatus recited in claim 1, wherein the enclosure is cylindrical.
6. (original) The apparatus recited in claim 5, wherein the light-emitting device is located on the bottom inside the enclosure.
7. (original) The apparatus recited in claim 6, wherein the opening is located on the top of the enclosure.
8. (original) An apparatus, comprising:
 - an enclosure having an opening to a cavity;
 - a device to emit light at the bottom of the cavity; and
 - a cover over the light-emitting device to diffuse the light;

-3-

David L. Graumann
Appl. No. 10/024,814

wherein the light emitted from the opening is only visible to a speaker when the speaker's mouth is within a sensitivity region of a microphone.

9. (original) The apparatus recited in claim 8, wherein the sides of the cavity are sloped.

10. (original) The apparatus recited in claim 8, wherein the depth of the cavity and the size and shape of the opening are designed so that the light emitted from the opening is only visible when the speaker's mouth is within the sensitivity region.

11. (original) The apparatus recited in claim 8, wherein the enclosure is capable of attaching to the microphone.

12. (original) A system, comprising:

a microphone having a sensitivity region; and

a plug capable of coupling to the microphone, the plug having an enclosure and a light-emitting device inside the enclosure to provide visual feedback to direct a speaker to stay within the sensitivity region.

13. (original) The system as recited in claim 12, wherein the microphone is a microphone array.

14. (currently amended) The system as recited in claim 13 42, wherein the microphone array uses time delay estimation to establish the sensitivity region.

15. (original) The system as recited in claim 12, further comprising a speech recognition application using input from the microphone.

16. (original) The system as recited in claim 12, further comprising a speaker verification application using input from the microphone.

-4-

David L. Graumann
Appl. No. 10/024,814

17. (original) The system as recited in claim 12, further comprising a conferencing application using input from the microphone.
18. (original) The system as recited in claim 12, further comprising a telephony application using input from the microphone.
19. (original) The system as recited in claim 12, further comprising a tablet coupled to the microphone.
20. (original) The system as recited in claim 12, further comprising a computing device coupled to the microphone.
21. (original) The system as recited in claim 12, further comprising an appliance coupled to the microphone, the appliance receiving control input from the microphone.
22. (original) The system as recited in claim 12, further comprising, an automobile application using input from the microphone.
23. (original) A method, comprising:
- providing an enclosure having a bottom, an opening, and a depth;
 - attaching a light-emitting device to the bottom of the enclosure, wherein the light-emitting device has a top surface;
 - calculating an angle θ so that the light-emitting device is only visible to a talker when the talker's mouth is within a sensitivity region of a microphone; and
 - manufacturing the opening and depth of the enclosure so that the angle θ is an angle between the top surface of the light-emitting device and a projection line drawn from an edge of the opening to an opposite edge of the light-emitting device.
24. (original) The method as recited in claim 23,

-5-

David L. Graumann
Appl. No. 10/024,814

wherein calculating the angle theta (θ) is performed by calculating $\theta = \arctan$
(beta (β) / alpha (α));

wherein beta (β) is a length of an orthogonal projection between an edge of the
opening and the bottom of the enclosure; and

wherein alpha (α) is a distance between the opposite edge of the light-emitting
device and the orthogonal projection.

25. (original) The method as recited in claim 23, further comprising:

providing a cover over the light-emitting device to diffuse the light;

wherein theta (θ) is the angle between the top surface of the light-emitting device
and the projection line drawn from the edge of the opening to the opposite edge of the
cover over the light-emitting device.